

UNDERSTANDING BRUSHLESS RC MOTOR SPECIFICATIONS

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Brushless motors use a standard numbering scheme to describe their physical size and kV rating. For example: let's assume we have a 5055-3000kV Brushless Outrunner Motor. We break the numbers out as follows: [50] [55] - [3000]

- [50] The first two numbers represent the diameter of the motor's housing in millimeters; in this example 50mm
- [55] The second two numbers represent the length of the motor housing in millimeters; in this example 55mm
- [3000] The numbers after the dash represent the kV rating of the motor; in this example 3000kV. The kV rating (not to be confused with kilo-volt) is the RPM of the motor (k) per volt (V) with no load. For example, a brushless motor with a kV rating of 3000 powered by a 12V power source would be capable of 36,000 RPMs (multiply 3000x12). This is the max RPMs that this motor can reach under no load. A motor with a higher kV will have more top end speed, but not as much acceleration/torque. A motor with a lower kV will not be as fast, but will accelerate faster and have more torque.

Prop Chart For Four - Stroke Engines

Engine Size	Standard Propellers	Alternate Propellers
.20 - .21	9x6	9x5,10x5
.40	11x6	10x6,10x7,11x4,11x5,11x7,11x7.5,12x4,12x5
.45 - .48	11x6	10x6,10x7,10x8,11x7,11x7.5,12x4,12x5,12x6
.60 - .65	12x6	11x7.5,11x7.75,11x8,12x8,13x5,13x6,14x5,14x6
.80	13x6	12x8,13x8,14x4,14x6
.90	14x6	13x6,14x8,15x6,16x6
1.20	16x6	14x8,15x6,15x8,16x8,17x6,18x5,18x6
1.60	18x6	15x6,15x8,16x8,18x6,18x8,20x6
2.40	18x10	18x12,20x8,20x10
2.70	20x8	18x10,18x12,20x10
3.00	20x10	18x12,20x10